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Modern Miracles in Our Factories

**U.S. Industrial Methods Have
Undergone Big Change
in Recent Years**

A NEW word—*automation*—has been cropping up frequently in magazine articles and news stories during the last few years. Defined as simply as possible, it means the use of machines to run and regulate other machines.

A familiar example of automation is provided by the thermostat which controls a furnace. The thermostat automatically turns up the furnace or holds it back, depending on the temperature of the building. This is a simple process, and it isn't particularly new. We have had devices such as thermostats for a long time in this country.

Within the last several years, however, engineers and technicians have carried the principle of automation forward in rapid strides. They have fitted machines together in vast, complicated systems that are almost self-operating.

The Ford Motor Company uses an automatic assembly line to make engine blocks. This installation, as long as a football field, performs 540 separate operations and turns out 100 blocks per hour. It takes only one man to run the control board for the whole complex system. The huge machines which lift, turn, shape, drill, and grind the engine blocks are guided

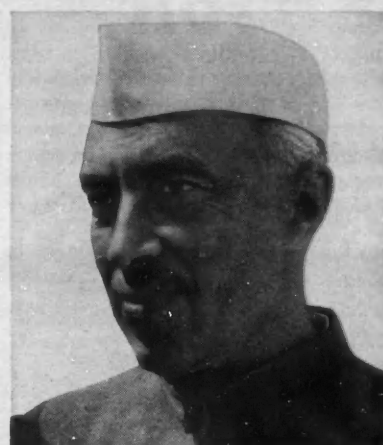
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GOVERNMENT OF INDIA

THREE LEADERS with differing views at the Asian-African Conference are (left to right): Ambassador Carlos Romulo of the Philippines, defender of democracy; Premier Chou En-lai of Red China, who speaks for communism; and Prime Minister Jawaharlal Nehru of India, who claims that his country is neutral and will stay clear of the communist-democracy struggle which is now going on throughout the world. (Critics of Nehru contend that he is not neutral.)

Asian-African Parley Convenes

**Delegates from Nearly 30 Lands Exchange Views This Week at Bandung,
Indonesia. Will Red China Be Successful in Rousing Feeling Against U.S.?**

TODAY—April 18—representatives of almost 30 countries of Asia and Africa are meeting in the volcano-ringed city of Bandung, Indonesia.

Delegates, correspondents, and observers have packed hotels and private homes to overflowing in this Javanese city of about 700,000 people. Many U.S. publications have correspondents on the scene, and radio broadcasters and television cameramen are on hand.

The meeting in Bandung represents the most ambitious conference yet attempted by the nations of Asia and Africa. Most of the countries taking part are either newly independent or

are in the process of achieving their freedom. The present gathering is an indication of the growing importance of these lands in world affairs.

Leaders in the United States and other western nations are keeping close watch on happenings in Bandung. Asia is one of the major battlegrounds in the cold war between the communist lands and the free world. Africa may well be the next big area of conflict. What goes on at Bandung this week may tell a great deal about the course these two continents will follow in the world struggle during coming years.

How did the Bandung Conference come to be held?

The idea for a meeting of Asian and African nations was born at a gathering of the Colombo powers last spring. The Colombo powers (so-called because they first banded together in a meeting at Colombo, Ceylon) are India, Pakistan, Burma, Ceylon, and Indonesia. These five nations invited 25 other governments to meet with them this spring and talk over matters of common interest.

What countries were invited to send delegates to Bandung?

The Colombo powers invited the following Far Eastern nations: Cambodia, Red China, Japan, Laos, Nepal, the Philippines, Thailand, North Viet Nam, and South Viet Nam.

Other Asian countries asked to attend—most lie in the Middle East—are: Afghanistan, Iran, Iraq, Jordan, Lebanon, Saudi Arabia, Syria, Turkey, and Yemen.

These African countries were invited: Egypt, Ethiopia, Gold Coast, Liberia, Libya, Sudan, and the Central African Federation. The latter country, composed of Northern and Southern Rhodesia and Nyasaland, declined the invitation. All others invited are expected to have delegates on hand when the conference convenes today.

The five Colombo powers will, of course, also be in attendance. They will very likely play major roles in the meeting.

What countries were not invited?

To know what countries were excluded from the Bandung Conference throws light on the feeling which brought about the meeting. For example, no western power was invited, even though such lands as Great Britain and France still have big holdings

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HERE AND ABROAD - - - PEOPLE, PLACES, AND EVENTS

A HIGH TRIBUTE

Prime Minister Sidney Holland of New Zealand pays high tribute to the United States for its gifts of billions of dollars to other lands since World War II. "I doubt whether there has ever been anything like the Americans' assistance programs," he stated recently. "Let us raise our hats to the American taxpayers." He said that it would take all the money that New Zealanders could earn in the next 22 years to equal the amount of American aid.

CANNED FOOD CHAMPIONS

Each American eats about 120 pounds of canned foods a year—more than any other people. Canadians get about 95 pounds of nourishment out of cans, the British between 30 and 40 pounds, and Australians slightly less.

HORSES IN RED CHINA

Communist China still has a scarcity of machines for farm and factory, despite her frequent boasts that she is developing into a strong industrial

land. The Red nation is buying large quantities of horses from Outer Mongolia for use in place of mechanical power.

LIFE SPAN STILL GOES UP

The average length of life for American industrial workers and their families is now 69.9 years—one year higher than in 1953 and 5½ years higher than 10 years ago—the Metropolitan Life Insurance Company reports.

LEADERS IN SHIPBUILDING

British yards launched 253 vessels with total tonnage of nearly 1½ million to hold first place among world shipbuilders in 1954. Germany floated 268 ships, more than any other nation, but total tonnage was not quite a million. The U. S. launched 46 ships with tonnage of nearly half a million to take fourth place (after Sweden), according to Lloyds' (British) Register of Shipping.

WHEAT STORED IN SHIPS

The Department of Agriculture is using 422 World War II cargo ships

for storing some of the wheat purchased under the farm price-support program. This is considered cheaper than building granaries, since the ships have been lying idle in harbors since the war.

THE PRESIDENT'S CLOCK

Mr. Eisenhower is using an office clock that was new around 1870 when President Grant occupied the White House. Its case is of marble, and it has a barometer, thermometer, and a dial that shows phases of the moon and the day of the week. "Ike" recently had his regular office clock put in the Cabinet room. The office replacement came from a White House storeroom.

MORE GIRLS IN HIGH SCHOOL

The United Nations reports that more girls around the world are attending high school than in past years. About half of high school students in Europe and North America are girls, and they make up a little more than a fourth of the number of students in Africa and Asia.

Modern Devices

(Continued from page 1)

almost entirely by electrical and electronic devices.

The Chrysler Corporation has a 12-ton machine which tests new engines to see that they are in proper balance. After testing, it automatically causes welding and drilling tools to correct any faults that it discovers. The whole process takes approximately two and a half minutes per engine.

The Pontiac division of General Motors has a production line on which pistons—untouched by human hands—are made at a rate of about 2,000

been going on throughout the Machine Age. Man simply is continuing to find new and more effective ways of using machines to lighten his burdens and produce goods in greater and greater quantity."

It is impossible to determine any exact point in history when our Machine Age began. One important early landmark, though, was the development of the steam engine—prior to the American Revolution. Later came the invention of the cotton gin, the development of railroads and locomotives, the creation of reapers and steam-powered threshing machines, the harnessing of electricity, and countless other achievements.

These inventions, varied as they

five times as much in goods and services that year as during 1900.

On the farm today, one man with modern implements can take care of several times as much land as could his father or grandfather. "To mine a ton of iron ore," says a recent government report, "the average miner took 114 minutes in 1915, but only 26 minutes in 1950. The electric washing machine and drier save the housewife four fifths of her former laundry time."

Besides the invention of new machines, our continuing industrial revolution has also involved the growth of increasingly efficient ways to use these machines. The story of Henry Ford helps illustrate this point.

Early-day production lines in automobile factories and elsewhere, even though they used the most modern equipment available at the time, required large numbers of workers. These workers regulated the machines, fed materials into them, tested the finished products, and so on. But today many such jobs are being taken over by marvelous new electronic devices, developed and installed during the last several years.

As a result, the following question arises: "When machines are brought into a factory to perform tasks formerly done by men and women, how are the displaced human workers going to make a living?"

This is no new question. It has been raised time and again during mankind's steady advance into the Machine Age. Sometimes, in the 1700's and 1800's, workers even went so far as to wreck the machines which threatened to take away their jobs.

During the great depression of the 1930's, when more than 12 million Americans were jobless, many observers blamed work-saving machines for the fact that about a fourth of our labor force was unemployed. In reply, it was argued that most unemployment during those days was caused by factors other than machines, and that new mechanical devices eventually create more jobs than they destroy.

War's Effect

When World War II came, it virtually wiped out unemployment. We needed all the goods and services that manpower and machines together could produce.

Since the end of that conflict, however, the number of jobless people has risen. In February 1955—the latest month for which figures are available as we go to press—there were more than 3½ million unemployed. So now, even though the unemployment problem is far less serious than what we faced during the great depression, labor and industrial groups are again debating the question of whether machines make jobs scarce.

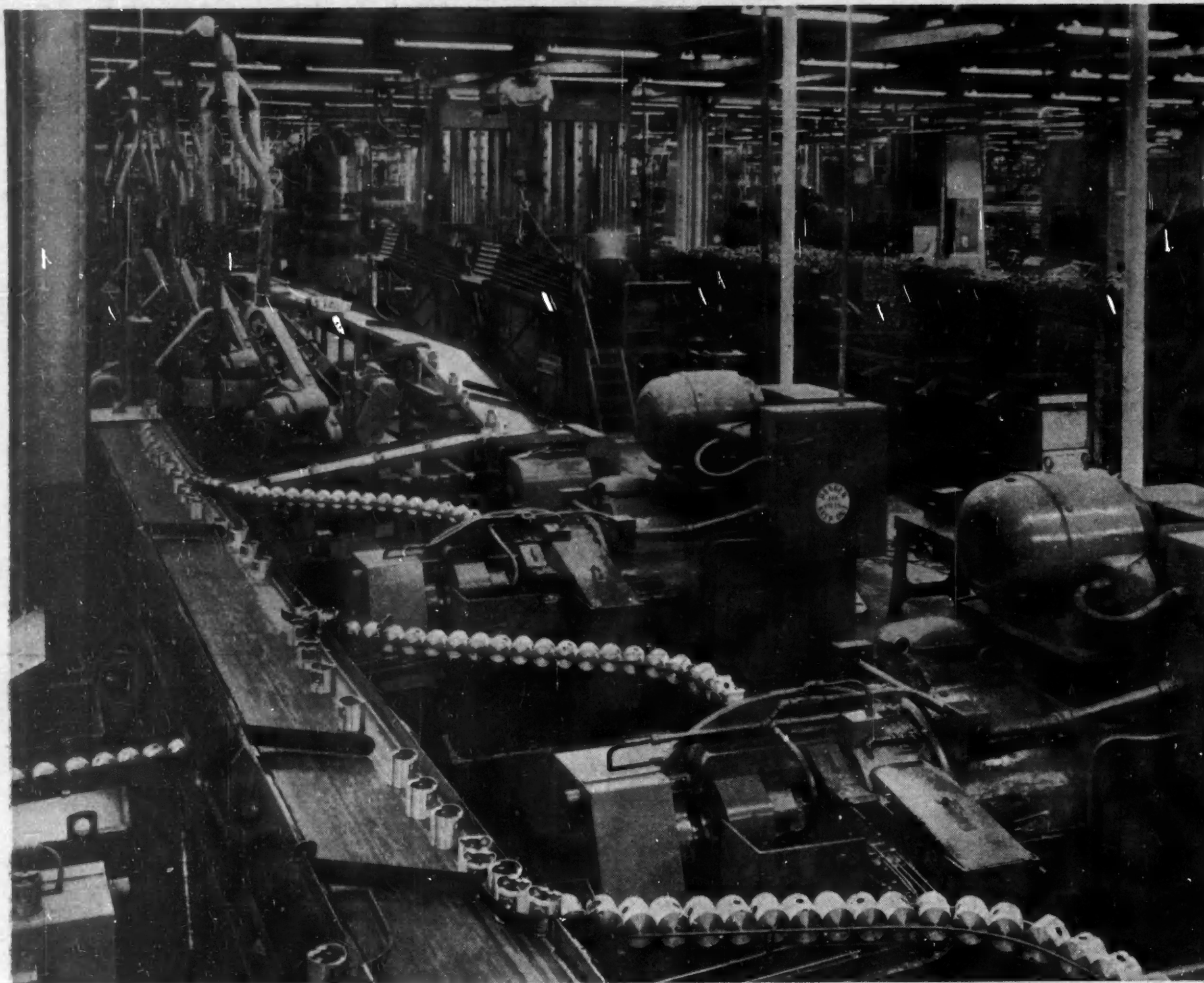
It would appear, at first glance, that they do. Equipment recently installed in a certain radio factory now enables two men to handle the work once done by 200. One of Ford's modern assembly lines enables 41 men to do the work once performed by 117.

The oil-refining industry reportedly was employing 137,000 men in 1954, compared to 147,000 in 1948. Automation is said to be largely responsible for the decline. According to a report prepared for the United Automobile Workers' union, complete automation would mean "that 200,000 men could match the present output of the million U.A.W. members in the automobile industry."

There are many observers, though, who think such figures are misleading. They argue as follows:

"We are a growing country with an expanding economy. Our population is increasing, and our people keep demanding more and more goods and services. Under these circumstances, American industry can and will provide new jobs for the people whom automation temporarily displaces.

"Jobless people in America today constitute roughly 5 per cent of our entire labor force—compared to about 25 per cent who were unemployed during the great depression of the 1930's. Unemployment is always serious for the families that it strikes, but it isn't now at a high enough level to indi-



FORD MOTOR CO.

AUTOMATION in Ford Company's Cleveland Engine Plant. Belt conveyors feed aluminum pistons through chutes into 25 machines that are fitted together with automation equipment. The whole operation of making pistons is carried out automatically. (Our accompanying article describes a similar mechanical operation by General Motors.)

per hour. Whenever faulty pistons come off this line, they are caught by self-operating inspection instruments. These instruments then show which of the automatic drills or other machines need readjustment.

Car factories are not the only industrial or business concerns where striking examples of automation can be found. Others include petroleum refineries, chemical plants, and factories that produce household appliances. Also, there is a rapid trend toward the use of machinery to perform a wide variety of bookkeeping operations and other tasks that are done in business offices.

Something New?

Though many people refer to such developments as a "new industrial revolution," it would be misleading to think or speak of automation as something wholly new and different. In fact, there are quite a few observers who feel that the word itself should never have been coined. They say:

"What we see today is just a further extension of the process that has

were, all served one basic purpose. They brought in machines and mechanical energy to replace men and animals on a multitude of tasks, and to do far more work than had ever before been possible by any means. They enabled man to produce more goods and services with less effort. They played a tremendous role in boosting the standard of living in our nation.

Prior to the Civil War, more than 50 per cent of all the work energy used in America was furnished by horses and other animals. Human beings, with their own muscles, provided about 20 per cent. Wind and water power accounted for most of the remainder.

At present, men and animals together furnish scarcely 5 per cent of all the work energy used in this country. The rest comes mainly from coal, petroleum, natural gas, and water power. Soon uranium will be making a sizable contribution, through the harnessed atom. Thanks largely to the machines and energy available by 1950, the United States produced about

Just a little over 40 years ago, Ford started producing his cars on an assembly-line basis. He took the whole task of building an automobile, and divided it into a large number of separate and distinct jobs. Then he set up his factory so that the cars under construction could be carried in steady procession, on power-driven conveyors, past long lines of workmen. Each worker, with the help of tools and machines, quickly performed his assigned piece of work on each vehicle as it reached him.

Mass Production

In organizing his plant, Ford drew heavily upon ideas which other people had developed earlier. But he carried these ideas out so thoroughly that he accomplished a far better job of mass production than anybody had ever done before. It enabled him to build automobiles so cheaply, and in such large numbers, that car ownership in America soon became commonplace. Even the families with comparatively low incomes were able to buy Henry Ford's famous "Model T."

cate that our country as a whole is in bad shape.

"New machines often displace certain types of workers, but their overall effect is to create more and more employment. Cars, trucks, and tractors took jobs away from people engaged in the manufacture of wagons and similar equipment. But motor vehicles created many times the number of jobs they destroyed. A great network of new industries developed, based on manufacturing, selling, and servicing these machines.

"Today, in a somewhat similar manner, automation is providing new jobs. Large numbers of people already are employed, making and repairing the complicated electronic devices which so many of our factories now use. We are even developing an export market for such instruments.

"An official of the General Electric Company calls attention to these facts: In 1880, when mechanical power supplied only 17 per cent of the work energy in America, there were jobs for only 17 million people. In 1954, with mechanical power furnishing 95 per cent of the work energy, there were 62 million jobs."

A somewhat different view is expressed by numerous other Americans, including quite a few labor leaders. These people emphasize the serious problem that automation is likely to bring. They argue as follows:

Caution Is Needed

"It may be true that new machines always create additional jobs in the long run. Even so, we mustn't forget the plight of those people who are displaced when such machines are first introduced. Employers must be encouraged to move carefully and gradually in the adoption of new labor-saving devices. If this is done, displaced workers can more easily be re-absorbed by business and industry.

"Here is another point we must not forget: One reason why there are jobs for so many more people today than formerly is that our present work week is shorter—so that the jobs are spread out among more people. Around 1900, the average laborer worked 10 hours per day, 6 days a week—or a total of 60 hours each week. Today the 40-hour week is commonplace.

"If automation reduces the total amount of human labor which needs to be performed, then our work week should be further reduced so as to spread the available work among all people who want jobs. If handled in this way, the continuing industrial revolution can bring greater and greater benefits—through added leisure—to millions of Americans."

Whatever else may be said about automation, there is one point on which practically all observers agree. If it does displace sizable numbers of workers, it is most likely to affect those whose jobs have been largely routine and unskilled. On the other hand, it will provide many new jobs, in such fields as electronics, which require much skill and training.

So now—more than ever before—young people who go out in search of employment will need to be well educated and well prepared. Now—more than ever before—it is important for a young person to start thinking and making plans about his adult career, long before his schooling is completed. Now—more than ever before—skill, training, and good workmanship are likely to pay big dividends.



SCENE from the new Paramount motion picture, "Strategic Air Command"

Radio-TV-Movies

THE role that the great bombers of the U. S. Air Force and their crews play in deterring an aggressor nation is graphically set forth in technicolor in "Strategic Air Command."

The movie tells the story of "Dutch" Holland (James Stewart), a professional baseball player, who is called back to active duty and is assigned to the bomb-carrying command. Holland's wife, Sally (June Allyson), resents the military life of her husband and the duties it entails. However, she finally comes to understand that his service in peacetime is helping to deter war.

Dramatic highlights of the film include an Arctic crash of a B-36, and a "ceiling zero" radar-guided landing of a B-47. Another tense moment is a close-up of the refueling in the air of a medium bomber. The Paramount film gives an exciting, behind-the-scenes glimpse of our Air Force.

The Betty Crocker All-American Homemaker of Tomorrow will be announced next Thursday, April 21, in a special telecast from Philadelphia. She will be selected from 48 state winners.

Actually the winner will be chosen from an original entry of 180,000 graduating senior girls in 8,000 high schools over the nation. The award will be made on the basis of a written homemaking examination, character, and personal observation. The winner will receive a \$5,000 scholarship.

The special telecast will feature

Eddie Fisher as master of ceremonies and will be entitled "Eddie Fisher Salutes Young America." In addition to the young singing star, there will be other topflight entertainment. The program will be presented over the ABC network from 7:30 to 8 p.m. (EST).

The AFL (American Federation of Labor) and the U. S. Chamber of Commerce are now participating in a new labor-management series heard on radio each Saturday. The AFL program, "As We See It," is heard from 7:30 to 7:45 p.m. (EST). Philip Pearl and Harry W. Flannery are featured, interviewing Federation and government officials on current issues.

The Chamber of Commerce portion, "This Week in Washington," is heard from 7:45 to 8 p.m. (EST). Jack Hamilton heads the program. Top news stories of national importance are analyzed, a feature story of timely interest is presented, and a local Chamber of Commerce is saluted. The new series of programs is heard over ABC stations.

U. S. movies are more than holding their own with Russian films in Southeast Asia, according to Robert Andrews, author and film writer, who recently toured the region. He said that red-tinged movies do badly in Thailand, and some leading theatres show only U. S. pictures. In Rangoon, Burma, Andrews reported that the fifth run of "Gone With the Wind" was outdrawing a Russian film.

PUZZLE ON CURRENT AFFAIRS

Fill in numbered vertical rows according to descriptions given below. When all are correctly finished, heavy rectangle will spell the name of an Asian country.

1. Small African republic represented at the Asian-African conference.
2. Indonesian city where the conference is being held.
3. Famous manufacturer and pioneer in the field of mass production.
4. Philippine delegate to the Asian-African talks who is expected to support our point of view.
5. Large communist nation represented at the conference.
6. Middle Eastern land, with territory in both Europe and Asia, which also is represented.
7. Capital of Idaho.
8. _____, largest of the so-called neutral nations attending the Asian-African discussions.

9. An independent North African country.

1	2	3	4	5	6	7	8	9

Two Weeks Ago

HORIZONTAL: Argentina. VERTICAL: 1. Brazil; 2. Peron; 3. Bogota; 4. mineral; 5. Andes; 6. Cortez; 7. Chile; 8. Monroe; 9. Amazon.

Readers Say—

A great deal has been said about proposals to lower the voting age to 18. Few people, however, seem to be doing much about this matter.

We of Manheim Township have prepared a petition requesting a lower voting age. We sent copies of it to our state legislators. Fully 70 per cent of the teen-agers in our school support the 18-year-old vote proposal.

BARRY J. BENN and RICHARD REECE,
Neffsville, Pennsylvania

Our class had a lengthy discussion on the issue of admitting Alaska and Hawaii to the Union. A majority of students in our class voted to admit both territories as states.

AMERICAN HISTORY CLASS,
HULBERT HIGH SCHOOL,
Hulbert, Michigan

I'm tired of hearing so much talk about juvenile delinquency. I realize there is a problem of crime among the nation's young people, but it isn't nearly as widespread as some people lead us to believe.

How about some action against this problem? Young people need supervised recreational programs and opportunities to engage in other activities outside of the classroom. If more people would spend time and energy in helping teen-agers along these lines, instead of accusing youths of being criminals, we would make much more headway in the fight against juvenile delinquency.

JIM HUGGINS,
Kalispell, Montana

I should like to comment on plans for two separate military training programs mentioned in a recent issue of your paper. I think it is all right to have a two-year draft for some, and a six-month training program for 100,000 youths each year. IQ tests should be given to all young men, and those with the highest scores should be permitted to sign up for the six-month training program. This would give the "bright" men an opportunity to serve their country in other ways.

Persons drafted into the service for two years can benefit from the background and experience they gain while on duty.

PETE TOLKMITZ,
Midland, Michigan

I most certainly don't think it is fair to have different training programs for different groups of youths. I feel that all young men should be required to serve for the same length of time at the same pay. Besides, six months of training isn't nearly enough to train men adequately in the ways of modern warfare.

R. K. SHELLEY, JR.,
Belmont, New York

I greatly enjoyed your article on the peacetime uses of the atom. Atomic energy, if properly used, can help provide us all with a bountiful living standard. If misused, the atom will only destroy us all.

A. LOUIS CYR,
Biddeford, Maine

I feel that Alaska and Hawaii ought to be admitted to the Union. After all, the people living there are Americans and they should be given the full benefits of citizenship that go with statehood.

ANITA WYRICK,
Knoxville, Tennessee

After thinking about the Philadelphia curfew plan for some time, I came to the conclusion that it would do very little to curb juvenile delinquency. Instead of curfews, we need teen-age centers sponsored by adults who understand the needs of young people and are willing to help them. In this way, teen-agers would not only have recreational outlets for their boundless energy, but they would also learn to become good citizens.

JEAN KLESATH,
Rolla, Missouri

We should make it very clear to Red China that we will not tolerate any act of aggression in the Far East. It seems perfectly evident to me that the Chinese communists are trying to dominate all countries on their side of the globe. They must be stopped now.

LILLIAN CASALE,
Hastings-on-Hudson, New York

The Story of the Week



THE U. S. AMBASSADOR to Spain, John Davis Lodge (right), chats with the Spanish head of government, Generalissimo Francisco Franco. Lodge, a former Connecticut governor, is the brother of our leading representative in the United Nations, Henry Cabot Lodge, Jr.

Schedule of Congress

Last week, Congress went back to work after a nine-day Easter recess. The lawmakers have a busy legislative schedule ahead of them. All told, there are some 5,400 bills awaiting action in the House, and more than 1,600 in the Senate.

The Senate is now going over the following proposals which have already passed the House: (1) a bill to grant the President additional authority to reduce tariffs on goods we buy from abroad if other countries do likewise; and (2) a measure to extend the draft law, which is due to expire next June, for calling young men between 18½ and 26 into the armed forces.

Both houses of Congress are scheduled to discuss a long list of bills including proposals to (1) provide 35 billion dollars for the coming year's defense budget; (2) set aside 3½ billion dollars for foreign aid; (3) increase payments to farmers under Uncle Sam's price-support program; and (4) grant statehood to Alaska and Hawaii.

Action taken by Congress, since our last report on its work, includes the following:

The Senate ratified a treaty for rearming West Germany as a western defense partner, and the upper house also approved Michigan's former Republican Senator Homer Ferguson as our country's ambassador to the Philippines.

The House voted 4 million of the 8 million dollars requested by the Eisenhower administration as our half-yearly contribution to the United Nations' program for aiding underdeveloped lands.

Both houses of Congress approved a bill granting pay boosts to men in uniform who have spent a certain minimum period of time in the service.

Final Hurdles

Soon German youths will once again take up arms. This time, unlike the days of World War II when the nazis waged wars of conquest, the Germans will be members of the western nations' defense team.

The agreement providing for a West German armed force within the framework of the North Atlantic Treaty Organization defense system has passed its last major hurdles. France and West Germany have approved the rearmament agreement. The U. S. Senate has also ratified the plan.

Last week, only the final OK's of Denmark and the Netherlands were needed to put the West German defense plans into force. These countries are expected to act on the matter shortly.

Next, West Germany will have to pass laws for calling men into service and for putting its defense machinery into operation. Under the rearmament agreement, the former enemy nation will have an armed force of about 500,000 men, an air force of some 1,300 planes, and a small naval fleet.

India Revisited

Chester Bowles, our ambassador to India from 1951 to 1953, recently came back from a return visit to the big Asian land. He says that he was truly amazed by that country's progress since his earlier stay there. Writing in the *New York Times Magazine*, Mr. Bowles has this to say about India today:

In 1953, and in the years before that time, there was hope in the air and a grim-faced determination among Indians to improve their lot. Now, there is a sense of calm assurance that India is making good progress, and that the nation's once troublesome communists have been dealt effective blows.

India has come a long way since gaining her independence in 1947. She has increased her farm production by 20 per cent since the mid-1940's.

Progress in education and health is spectacular. Up to 1953, an average of about 100 million cases of malaria were reported each year. The figure has now been reduced to 25 million annual victims of that dread disease.

Over half of the children between 6 and 11 years of age now attend schools. A few years ago, only about

a fourth of those in this age group were in school.

Throughout India, village-development programs are in full swing. Persons trained by U. S. experts and by the Indian government are going from village to village to help organize schools, show farmers how to grow better crops, and fight disease. Because of such programs as these, Red agitators are losing their former hold on India's poor.

Of course, India still has gigantic problems to solve in the years ahead. More than half of all Indian families still live on earnings of less than \$250 a year. Indian factory workers receive, on an average, less than \$1 a day. There are some 80 million people in the country who are partly or wholly unemployed.

Change of Command

Former British Prime Minister Sir Winston Churchill once said of his good friend, Sir Anthony Eden, "We think alike without consultation." During the 15 or more years that the two men have worked as a team in British public life, Eden and Churchill almost never differed on how the affairs of their country should be run.

Prime Minister Eden, who stepped into Churchill's place as British leader when the latter retired from office about two weeks ago, is continuing to conduct his country's affairs along the same lines as his predecessor did. Eden is expected to make few if any changes in those policies during his term of office.

The new British Prime Minister will soon ask the citizens of his country for a vote of confidence. A date for national elections may already have been set by the time this paper reaches its readers. We shall discuss the British political situation in a main article next week.

Red Squeeze Play

Berlin, which is partly ruled by the Soviets and partly supervised by the United States, Britain, and France, is surrounded by Red-controlled East Germany. A super-highway, some rail lines, and air lanes cut across 100 miles of East Germany and link free West Berlin with the rest of the democratic world.

Earlier this month, the Reds

adopted new measures to hamper highway traffic to West Berlin. They boosted the round-trip toll charge for Berlin-bound trucks from a top fee of about \$5 to as much as \$70 per vehicle.

Because truckers say they are unable to pay the new fees, the West German government has agreed, at least temporarily, to foot the bill for the increased toll charges. Meanwhile, we and the Germans have sent protests to the Soviets over the exorbitant toll charges.

Western officials wonder if the Reds are planning to put a squeeze on West Berlin as they did seven years ago this month. At that time, Moscow almost completely choked off Allied rail and highway traffic to the former German capital.

Only a dramatic airlift saved beleaguered West Berlin from the threat of starvation. During the 10-month Soviet "blockade" of the German city, American and British planes flew over 1½ million tons of food, clothing, and other goods to West Berlin.

Bandung Personalities

Officials of some 30 Asian and African countries are meeting at Bandung, Indonesia this week (see page 1 story). They include the following men:

India's Prime Minister Jawaharlal Nehru. Now 65, Nehru has played a prominent part in directing his country's affairs ever since India became independent of British rule in 1947. Before that time, he devoted much of his time to old India's fight for freedom. Though he strongly opposes communism at home, Nehru is accused of being more sympathetic with Russia and Red China than he is with the non-communist powers.

Pakistan's Prime Minister Mohammed Ali. The 45-year-old chief of Pakistan was first elected to his country's legislature when the Asian land was established in 1947. He later served as Pakistan's envoy to other countries, including the United States. Ali became a good friend of the U. S. during his stay here and visited us late last year. He became prime minister of Pakistan in the spring of 1953.

Red China's Premier Chou En-lai. A strong foe of the western nations,



A NEW FINGER SPLINT of lightweight metal, developed in Sweden. It holds a damaged finger straight and requires no additional cast or bulky bandage.





BEACH SCENE on the colorful Indonesian island of Java, which representatives at the Bandung meeting may find time to enjoy. While this scene does not show many people, Java is one of the world's most heavily populated areas.

Chou is set in his ways and is not easily persuaded to change his views. The 56-year-old Red official has been active in China's communist movement since the 1920's, and is now a top member of his country's ruling group.

Indonesia's Premier Ali Sastroamidjojo. Indonesia's chief of state, who will be 52 next month, became active in his country's fight for independence from Dutch rule in his student days. After World War II, Indonesia won its freedom, but the struggle for independence left Sastroamidjojo with an unfriendly and suspicious feeling for all western nations which have colonial possessions in the Far East.

Japan's Minister of State Tatsunosuke Takasaki. Takasaki heads Japan's delegation to Bandung. A prominent industrialist, he helps direct his country's economic affairs. The 70-year-old official went to work for the Japanese government in 1945. He is considered to be a good friend of the U. S.

General Carlos Romulo. The Philippines' representative at Bandung, General Romulo, is one of our country's staunchest supporters in the Far East. Now 54, he fought side-by-side with American forces against the Japanese invaders in World War II. He is a man of many careers, and has made a name for himself as a writer, newspaper publisher, and diplomat.

At present, Romulo serves as his country's trouble-shooter abroad and he often represents the Philippines at important global meetings.

Hope for Austria?

Since the end of World War II, Austria has been divided into occupation zones. Russian troops have occupied a big slice of eastern Austria. American, British, and French forces have been stationed in western zones. All four powers have been supervising Vienna, the land's capital. An

elected government for the entire country has been running most Austrian local affairs without interference from the four occupying nations.

In 1945, American, British, French, and Russian officials sat down to write a treaty for Austria. The Soviets asked for huge quantities of money and property from the Austrians. Russia refused to take her troops out of the tiny land. We told the Soviets that their demands were unfair to Austria. No peace was signed.

Since 1945, western leaders have met hundreds of times with the Russians in fruitless efforts to write an Austrian peace treaty. No agreement has been reached thus far.

Last week, Austria's chief, Chancellor Julius Raab, went to Moscow in his latest effort to get a peace treaty for his country. At our press time there is no news of the outcome of the Austrian-Soviet talks.

In size, Austria is slightly smaller than Maine. Large numbers of her nearly 7 million people are farmers. Wheat and other grains, potatoes, and sugar beets are important crops. A number of farmers also earn a living by raising livestock. Austrian factories turn out steel, textiles, and a variety of articles made of wood.

Unless unforeseen developments arise, next week's major articles will deal with (1) U. S. living standards; (2) the British political situation.

Next Week's Articles

Unless unforeseen developments arise, next week's major articles will deal with (1) U. S. living standards; (2) the British political situation.

THE LIGHTER SIDE

A Scotsman has invented a bagpipe which plays when plugged into a light socket. And yet they say that necessity is the mother of invention.

★

The lad who always had difficulty in finding the shortest distance between two points grew up to be a taxi-driver.

★

Smith: That music my daughter's playing is very difficult.
Green: I wish it were impossible.



"Quick, comb my hair!"

Definition of Rhode Island: Texas after taxes.

★

We'd all get more mileage in life if we'd never shift our mouths into high gear until our brains are turning over.

★

The reason the average girl would rather have beauty than brains is that men who can see so greatly outnumber those who can think.

★

A man who took part in a radio-TV guessing contest was wrong 10 consecutive times. The next day he was employed as a weather forecaster.

★

The lady had just stepped off the scales. "Well," asked her husband, "what's the verdict? A little overweight?" "Oh, no," she replied, "but according to the height table, I should be six inches taller."

★

At certain times of the year, natives of Borneo perform a frenzied dance around holes they have dug in the ground. Golf, it seems, is spreading everywhere.

News Quiz

Automation

1. In simple terms, what is meant by "automation"?
2. Give some examples of how it is applied in modern factories.
3. In general, what basic purposes and effects have been common to all our Machine Age inventions?
4. About what portion of all the work energy used in America today is furnished by men and animals? What was the situation in this respect prior to the Civil War?
5. How much did our national output of goods and services increase during the first half of the present century?
6. Discuss Henry Ford and his contribution to American industrial development.
7. How has automation affected the assembly line?
8. With respect to labor, what serious question does automation raise? Is this question old or new?

Discussion

1. Do you think we should regard the automation trend as a new industrial revolution, or simply as a continuation of the old? Explain your position.
2. What do you think will be automation's long-range effect on job opportunities and working conditions in America? Give reasons for your answer.

Bandung Conference

1. What nations laid the groundwork for the Bandung Conference?
2. List the major lands represented at Bandung.
3. Name some of the important countries excluded from the meeting.
4. What do the Bandung Conference nations have in common?
5. How are these lands different?
6. What are some of the subjects that will probably be discussed at Bandung?
7. How is it thought that the communists will try to profit by the meeting?
8. In what respect is the United States relying on its friends at Bandung?

Discussion

1. Do you or do you not think that India and the other countries that say they're following a neutral course are, by their actions, contributing to world peace? Explain your answer.
2. Do you believe that the United States can win the close friendship of most of the countries of Asia and Africa? If not, why not? If so, how?

Miscellaneous

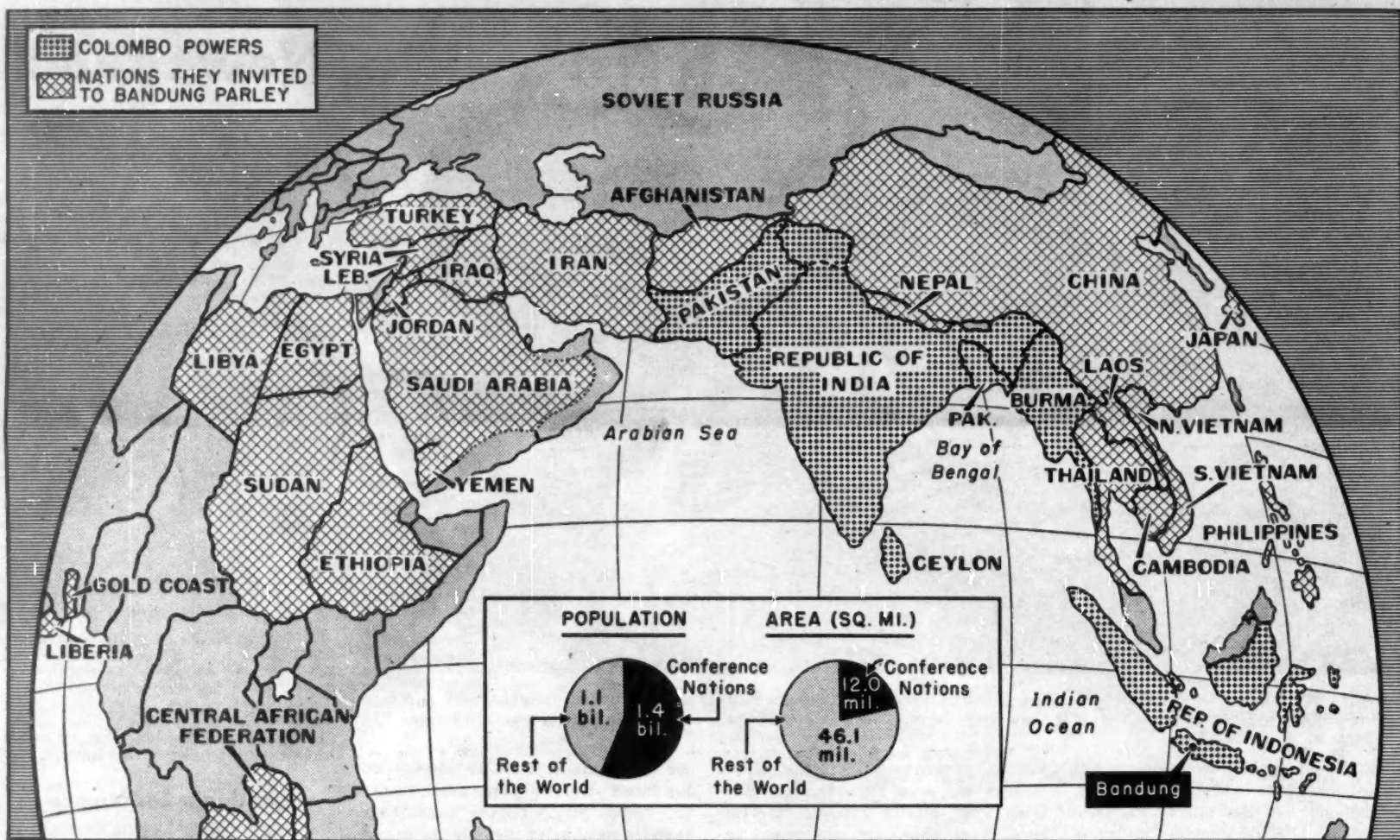
1. Is Britain's new Prime Minister, Anthony Eden, expected to make any important changes in the handling of his country's foreign affairs? Explain.
2. Identify: Nehru, Mohammed Ali, Chou En-lai, and Ali Sastroamidjojo.
3. How large a defense force will West Germany have when present rearmament plans go into effect?
4. Why is West Berlin concerned about the possibility of another Soviet "blockade"?
5. What are some of the big measures now awaiting action by Congress?
6. How long has Austria been waiting for a peace treaty?

References

- "Automation — Blessing or Curse?" Life, January 17, 1955.
"Pontiac Does It with Machines and Does It Better," Business Week, November 6, 1954.
"Automation's Pushbutton Techniques Spread," Nation's Business, December 1954.

Answers to Your Vocabulary

1. (b) offending; 2. (a) beginning; 3. (c) compulsory; 4. (b) injurious; 5. (d) angry dispute; 6. (a) differences; 7. (c) proved its accuracy.



FIVE ASIAN NATIONS, called the Colombo Powers, invited 25 other governments to the Asian-African Conference in Bandung, Indonesia, this week

Bandung Parley

(Continued from page 1)

in Africa and smaller possessions in Asia. Russia, which is both an Asiatic and European country, likewise did not receive an invitation.

Several independent lands in Europe and Asia were not invited. All the Colombo powers consider the communists to be China's rightful rulers. Therefore, the government of Nationalist China—on Formosa—did not receive an invitation.

Neither free South Korea nor communist North Korea was invited. The inviting nations said that Korea could not be invited until it was one land again. (They said, however, that the situation in Viet Nam was "different," and invited both governments in this divided land.)

Other independent lands not invited include Israel and the Union of South Africa. The inviting powers may have felt that if Israel should attend, several Arab lands—hostile to Israel—would not. The Union of South Africa was not asked because of the severe restrictive laws which that government places upon Negroes and Indians.

What common ties unite the nations represented at Bandung?

They are linked by geography. These countries stretch all across southern Asia into northern Africa. Only Liberia and the Gold Coast in western Africa are far separated from the others. The nations represented at Bandung have more than half of the world's people.

A strong spirit of nationalism is a second factor common to these lands. A few of them have long been independent, but most have thrown off colonial status in fairly recent years. India, Burma, Pakistan, Egypt, and

certain other lands of the Middle East were long under British control, and even now the Gold Coast has not achieved complete freedom. Indonesia was ruled by the Dutch, and the French long controlled Indochina. The United States held the Philippines for nearly 50 years.

These lands are determined never again to come under foreign control, and they want to play a bigger role in world affairs. A vigorous nationalism, hatred of colonialism, and a desire for a "place in the sun" are among the strongest ties these countries have in common.

Most of the lands are poor—as compared to western countries—and living standards are generally low. Some have considerable natural wealth—Indonesia, for example—but it is mostly undeveloped. Today the countries represented at Bandung are "have-not" lands—but they do not intend always to remain that way. They are ambitious to modernize agriculture and embark on industrial programs. These steps, it is generally felt, are the keys to higher living standards.

What differences exist among these countries?

Several shades of political thought are represented at Bandung. Red China and North Viet Nam, for example, are communist lands, and are close allies of the Soviet Union.

On the other hand, a number of the Bandung nations are allied with the United States and other western lands. Among them are the Philippines, Japan, Thailand, Pakistan, Turkey, and Iraq. Ethiopia and Liberia in Africa are also regarded as good friends of the United States.

The majority of the lands with delegates at the conference in Bandung are not linked closely to either side in the cold war. They claim to be following a neutral path in world affairs,

and say they do not want to become closely allied with either the communist lands or the western powers.

India is the leader of the "neutralist" group. Indonesia, Nepal, Burma, and Ceylon usually—but not always—follow India's lead in world affairs. To some observers, it has seemed that certain of these lands—India and Indonesia, in particular—have on numerous occasions veered close to the communist side in the global struggle.

Most of the Arab lands of the Middle East are also following a neutral policy. Unlike the countries of Southeast Asia, though, the Arab lands have not recognized Red China. In the minds of some observers, the Arab countries, though remaining aloof from the world struggle, are not as "soft" on communism as the Asian "neutral" group.

What matters are expected to be discussed at Bandung?

According to the official statement announcing the Bandung Conference, its purposes—in summarized form—are: to promote good will and cooperation among the nations of Asia and Africa; to consider social, economic, and cultural problems; to discuss issues affecting national sovereignty, racialism, and colonialism; and to see how world peace can be promoted.

These objectives are set forth in such general terms that it would seem that just about any subject might be introduced. Certain of the questions that may be discussed at Bandung are as follows:

(1) How can the independent lands of Asia and Africa be assured that they will never again be dominated by outside powers? Are such colonial areas as Morocco and Tunisia being given a fair opportunity to achieve freedom?

(2) What can the newly independent countries of Asia and Africa do to lessen global tension? Can these

nations help to bring about smoother relations between the communist lands and western powers? How can the dispute over Formosa be settled without war? How can atomic warfare be averted?

(3) How can the Asian and African lands work together to raise living standards for their peoples? What steps can be taken to give the newly independent lands a bigger role in world affairs?

It seems doubtful if any major decisions will be reached concerning the struggle between the free world and the communist lands. The wide range of political opinion represented at the conference makes it difficult, it would seem, to reach agreement on such matters. Some observers feel that highly controversial issues may be sidestepped in order to keep the conference from turning into a quarrelsome affair.

Why are U.S. leaders watching events in Bandung so closely?

Our leaders know that the communists will try to use the conference to achieve their own goals. Chou En-lai, Red China's premier, will—it is thought certain—try to arouse feeling against the United States on whatever subject comes up.

For example, if the subject of atomic warfare is discussed—as it probably will be—the Reds will very likely point out that the United States dropped the first atomic bomb on an Asian city. They will quite possibly emphasize that our hydrogen bomb tests in the Pacific resulted in the poisoning of some Japanese fishermen. They will probably picture the United States as completely to blame for the atomic-arms race.

If the Reds should be successful in putting over their views, the U.S. would suffer a loss of prestige. Since we are not present to give our views officially, our leaders fear that the

delegates could receive a false picture of the world struggle.

What can we do to offset the propaganda of the Reds?

Fortunately we have some good friends among the nations represented at Bandung. Our leaders feel that the best thing we can do is to have our friends ready to meet such propaganda attacks as the Reds may launch.

The Philippines, Pakistan, and Thailand are among our best friends at the conference. Carlos Romulo, a strong supporter of the United States and a former president of the United Nations General Assembly, is heading the Philippine delegation. It is felt that Romulo may be the most effective spokesman in combating Red views.

Romulo will be able to offset communist charges of "U.S. imperialism" by telling how we helped his country become independent, and by reviewing the ways in which we are helping the Philippines. He and other delegates from countries friendly to the United States may also have to meet Red propaganda on such subjects as atomic warfare. It will help keep the record straight for them to point out that Soviet Russia has repeatedly refused to cooperate on a disarmament program with airtight safeguards proposed by the United States.

If our views are presented fairly along with those of the communists, U.S. leaders are confident that most of the delegates at Bandung will not swallow the Red propaganda. Therefore, we are counting on our friends to come to our aid, if necessary, this week. If they do so, they may be able to expose the Red propaganda for what it is, and thereby strengthen rather than weaken the U.S. position in Asia and Africa.

Your Vocabulary

In each sentence below, match the italicized word with the following word or phrase whose meaning is most nearly the same. Correct answers are on page 5, column 4.

1. Molotov could accept the invitation without *affronting* (ā-frūn'ting) the Chinese. (a) consulting (b) offending (c) worrying (d) endangering.

2. Could economic aid for Asia check *incipient* (in-sip'i-ent) communism? (a) beginning (b) contagious (c) firmly established (d) growing.

3. Dismissal of atomic workers who refuse to testify before congressional committees is *mandatory* (mān'dūh-tō-rī). (a) recommended (b) wise (c) compulsory (d) unjust.

4. The voters became convinced that it was a *pernicious* (per-nī'shūs) law. (a) useless (b) injurious (c) good (d) permanent.

5. An *altercation* (all'tēr-kā'shūn) ended the meeting. (a) special resolution (b) interruption (c) emergency (d) angry dispute.

6. There are great *disparities* (dis-pār'i-tees) in Latin American living conditions. (a) differences (b) similarities (c) inconveniences (d) improvements.

7. When the newspaperman *verified* (vēr'i-fid) the official report, he (a) severely criticized it (b) strongly praised it (c) proved its accuracy (d) studied it carefully.

A Good Example—By Walter E. Myer

OF all the talented members of the court of Queen Elizabeth I, none was more brilliant than Sir Philip Sidney. Traveler, soldier, poet, and popular idol, Sidney perhaps typified the Elizabethan Age—with its atmosphere of change, spirit of progress, and love of literature—better than any of his fellows.

One of the reasons for Sidney's widespread popularity was his consideration for others. Though he associated with royalty, he was unfailingly considerate of those in lower walks of life. The story told about him in the moments preceding his death is one of the finest examples of thoughtfulness that can be found anywhere.

While serving his country as an official in the Netherlands, the 32-year-old Sidney took part in a battle with a Spanish force. During the conflict, he was struck by a bullet. As he lay dying, he was handed a drink of water, but he passed it on to a wounded soldier lying near him, saying: "Thy need is greater than mine."

Consideration for others is a trait that marks the well-mannered person no less today than in Sidney's time. The qualities that are the foundation of good manners have not changed in the past 375 years. Nor, let it be said, is the need for good manners any less urgent now than it was then.

Courtesy and consideration in your dealings with others will be important to you in whatever you undertake. These qualities will help you get along smoothly with others in school, at home, in your life work, and in all your associations.

Thoughtfulness for your associates is the basis of good manners. It is also essential to possess a sense of fairness, which will keep you from taking undue advantage of others.

Such a sense of fairness was shown

the other day by Al Rosen of the Cleveland Indians. Before a baseball game in San Francisco, Rosen took part in a contest to see who could hit the most drives into the bleachers or out of the park. The judges decided that Rosen had nosed out a San Francisco player, and awarded the Cleveland a handsome trophy.

Later Rosen appeared in the San Francisco clubhouse. He said the judges had not realized that one of



Walter E. Myer

his drives was a foul, and therefore should not have given him credit for it. Rosen gave the trophy to his rival.

The sooner you make a habit of displaying good manners (which includes sportsmanship, courtesy, thoughtfulness, and similar qualities), the more pleasant you will find your relationships with other people. Of course, one should not overdo politeness to the point of abject bowing and scraping before others. Making a big show of manners is as bad as to be lacking in them.

Remember, though, that you will seldom go wrong in any given situation if you think of the other person's feelings and make him feel at ease.

Pronunciations

Ali Sastroamidjojo—ā'lē sā-strō'ā-mī-jō'yō

Bandung—bān'dōōng

Carlos Romulo—kār'lōs raw'mōō-lō

Chou En-lai—jō ēn-lī

Jawaharlal Nehru—juh-wā-hur-lāl' nē'rōō

Mohammed Ali—mōō-hām'mēd ā'lē

Raab—rāb

Tatsunosuke Takasaki—tāt-sōō-nō-sōō-kē tā-kā-sā-ki

The World of Sports

TWO years ago, Al Kaline was a member of the baseball nine at Southern High School in his home city of Baltimore. Today the 20-year-old youth is a topflight outfielder for the Detroit Tigers. He will very likely be the youngest "regular" in the big leagues this season.

Last year, Kaline, at the age of 19, hit .276 for Detroit in 135 games.



AL KALINE is one of the youngest ball players in the big leagues

He is one of the fastest runners in the league and has a rifle-like throwing arm. He seems almost certain to be one of baseball's future stars.

Another outstanding young player who also seems sure of achieving stardom is outfielder Hank Aaron of the Milwaukee Braves. Aaron, who comes from Mobile, Alabama, celebrated his 21st birthday a few months ago. In 122 games with the Braves last year, he batted .280 and hit 13 home runs.

Among the youngest big-league pitchers to appear frequently on the mound this season may be Herb Score of Cleveland and Camilo Pascual of Washington. Each is 21. A pair of 19-year-old hurlers who may see considerable action but who, at this stage, can hardly be rated as "regulars," are Bob Miller of Detroit and Joe Jay of Milwaukee.

Among other young big-leaguers who may play a lot are Billy Consolo, 20, Boston Red Sox infielder, and Roberto Clemente, 20, Pittsburgh outfielder. Most teams have a number of young players—not mentioned here—sitting on the bench. Few, though, are expected to play very often.

Monthly Test

NOTE TO TEACHERS: This test covers issues of the AMERICAN OBSERVER dated March 7, 14, 21, 28, and April 4. The answer key appears in the April 18 issue of *The Civic Leader*. Scoring: If grades are to be calculated on a percentage basis, we suggest that a deduction of 3 points be made for each wrong or omitted answer.

DIRECTIONS TO STUDENTS: In each of the following items, select the correct answer and write its letter on your answer sheet.

1. A serious problem hampering unity among Middle Eastern countries is (a) Russia's control of Iraq's oil resources; (b) disputes between the Arab lands and Israel; (c) Egypt's refusal to let Turkish ships use the Suez Canal; (d) open warfare between Iran and Afghanistan.

2. Spain receives economic aid from the United States because (a) our allies in western Europe begged us to help her; (b) she helped us defeat Germany and Italy in World War II; (c) she has given us the use of certain Spanish air and naval bases; (d) she is the leading democratic nation of western Europe.

3. Radioisotopes are of great value in (a) carrying on medical and agricultural research; (b) setting off hydrogen bombs; (c) constructing hydroelectric dams; (d) providing power for submarines.

4. One of Latin America's great needs is (a) more fertile soil; (b) a much larger population; (c) a better climate; (d) more education.

5. An important reason why Pierre Mendes-France lost his job as premier of France is that he (a) favored greater independence for French colonies in North Africa; (b) concluded a cease-fire agreement with the communists in Indochina; (c) urged France to withdraw from the North Atlantic Treaty Organization; (d) approved the establishment of a German army.

6. Practically everyone in the United States agrees that (a) the federal government should pay all school construction costs; (b) states and local governments should bear all school costs; (c) speedy action is necessary to provide more schools; (d) the federal government should control all educational activities.

7. The legislatures for Hawaii and Alaska are selected by (a) the President of the United States; (b) people living in the territories; (c) the U. S. Congress; (d) the U. S. Supreme Court.

8. Heated political discussions were caused last month by the release of (a) Alger Hiss from prison; (b) the secret Yalta papers; (c) the secret Potsdam papers; (d) information on all loyalty risks in government service.

9. The people of Alaska and Hawaii have voted by big majorities in favor of (a) cutting all ties with the United States; (b) remaining as territories of the United States; (c) adopting a newly proposed commonwealth status; (d) becoming states in the Union.

10. It is generally agreed that the United States has made very slow progress in developing (a) an adequate system of civilian defense; (b) atomic weapons; (c) good programs of medical research; (d) safeguards against disloyalty and subversion.

11. Most industry and trade in Morocco, Algeria, and Tunisia is controlled by (a) U. S. military forces; (b) Egyptians; (c) Frenchmen; (d) Moslems and Berbers.

12. One reason why living standards are generally low in Latin America is that (a) Latin America refuses to carry on trade with other lands; (b) the people of Latin America don't want a high standard of living; (c) much of Latin America's vast natural wealth is not yet being used; (d) most parts of Latin America are under communist control.

13. Canada ranks among the leading nations of the world in all the following ways except (a) in natural wealth; (b) in area; (c) in productivity of her farms, mines, and factories; (d) in population.

(Concluded on page 8)

Monthly Test

(Concluded from page 7)

14. U. S. leaders are concerned about unrest in North African lands because (a) our air and naval bases there provide important defenses against communist Russia; (b) we depend heavily on this area for oil supplies; (c) Russian communists have already taken over two native governments; (d) we have enormous industrial investments in these lands.

After the corresponding number on your answer sheet for each of the following items, write the word, name, or phrase that best completes the question.

15. Which nation has taken the lead in offering atomic materials and know-how to other countries?

16. The Pyrenees Mountains separate Portugal and _____ from the rest of Europe.

17. It has long been assumed that _____ would succeed Winston Churchill when he retired.

18. The headquarters of the Organization of American States is located in the city of _____.

19. Lands in the Middle East hold about 60 per cent of the world's known reserves of _____.

20. The United States purchased Alaska from _____ in 1867.

21. Members of _____ have had their yearly salaries increased to \$22,500.

22. Name the Middle Eastern country, lying partly in Europe and partly in Asia, which is an ally of the United States. _____

Identify the following persons. Choose the correct description from the list below. Write the letter which precedes that description opposite the number of the person to whom it applies.

23. Francisco Franco

24. Gamal Nasser

25. Val Peterson

26. Moshe Sharett

27. Harold Stassen

28. Juan Peron

A. Premier of Israel

B. President of Argentina

C. Head of Spanish government

D. Prime Minister of Canada

E. Premier of Egypt.

F. Civil Defense Administrator

G. Presidential adviser on disarmament problems

After the corresponding number on your answer sheet for each of the following items, write the letter of the word or phrase that makes the best definition of the word in italics.

29. Even the *timorous* members of the group asked for action. (a) radical; (b) opposition; (c) fearful; (d) older.

30. Two *interim* appointments were made by the governor. (a) temporary; (b) permanent; (c) unwise; (d) judicial.

31. Leaders of the party took *overt* action to win the election. (a) secret; (b) illegal; (c) unpatriotic; (d) open.

32. The main points of his speech were *nebulous*. (a) hazy and indistinct; (b) humorous; (c) very unusual; (d) extremely sound.

33. She proved to be a *taciturn* witness (a) talkative and entertaining; (b) silent and reserved; (c) moody; (d) changeable.

A Career for Tomorrow - - In Electronics

The trend toward automation in factories and business offices (see page 1 story) is opening up many new job opportunities for persons trained in electronics.

Men and women with a knowledge of this field design, manufacture, and maintain the machines which run other machines on the production line. They turn out devices which are taking over more and more of the duties performed by human hands in the business office. Persons trained in this field also work with radio and television transmitting equipment and receiving sets.

The various types of jobs in electronics are similar in that they depend upon the use of either the vacuum tube or the transistor—a basic unit in radio and television sets, radar, and automation devices.

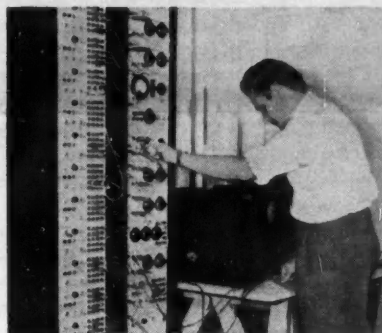
Your duties, if you choose this field, will depend upon the specific type of work you plan to do. There are, generally speaking, three groups of employees who do the technical work in radio and electronics. At the bottom are *unskilled workers* who assemble such equipment as radio sets and electronic devices.

Skilled employees or *technicians* test equipment after it has been assembled, or do repair jobs. They also work in research and development laboratories, where they may do anything from routine tests to complicated construction jobs that are essentially engineering in nature.

At the top of the technical ladder in the field are the *engineers*. They make over-all plans in factories where

the equipment is made and supervise major projects, such as the building of a radio or television station. The engineers also develop new types of equipment, and they often find new uses for devices that have already been made.

Your qualifications in all technical phases of radio and electronics should include mechanical ability, manual dexterity, patience, and an aptitude



AN ENGINEER in electronics

for mathematics. As you come up the ladder of jobs in the field, you will need an increasing amount of imagination and perseverance. Inventions in electronics are constantly being made, so a flexible mind and the ability to grasp new ideas quickly are required for work at almost any level.

Your training will depend upon the kind of job you eventually want to hold. If you want to do only the unskilled tasks, you will need little formal training. You will learn your

specific duties after you go to work.

To reach the rank of technician, you should take a one- or two-year course in a technical school. There you will study electricity, mathematics, and the principles of electronics.

If you want to be an engineer, you should get a college degree in electrical engineering or some related field.

Your salary, as a worker in manufacturing plants or as a radio or television repairman, is likely to be between \$50 and \$100 a week. Technicians have somewhat higher salaries. Engineers start their professional careers at pay scales ranging from \$4,500 to \$6,000 a year. A large number of those who are experienced earn from \$7,000 to \$10,000 a year, and there are quite a few top-flight engineers whose incomes are much higher than these.

Opportunities for advancement in electronics are good. It is a growing field and the demand for trained persons is expected to be high for many years to come. Also, individuals with experience in radio and television repair work can, if they have business ability, go into business for themselves.

Further information can be obtained from the Pratt Institute, Brooklyn 5, New York, and the DeVry Technical Institute, 4141 Belmont Avenue, Chicago 41, Illinois. You can get a pamphlet entitled "Employment Outlook in Electronics Manufacturing," for 25 cents in coin from the Superintendent of Documents, Washington 25, D. C.

Historical Backgrounds - - Our Time Zones

DAYLIGHT-saving time will be put into effect late this month or in early May as has long been customary in numerous cities and towns throughout the country. Clocks will be moved ahead one hour, and the daylight-saving method will be in use until fall.

Under such circumstances, the traveler will have to be on the alert if he wants to be sure of catching a train or plane. A city may be on daylight time, but trains or planes probably will be using standard time—so as not to upset normal operation of nation-wide transportation systems.

Except during the daylight-saving period, clocks are uniform through each of the four big U. S. standard time zones. The zones were developed in fairly recent times.

Some 70 years ago, each town or community set its clocks as it pleased. Either it would establish its own "standard time," through observation of the sun, or it would adopt the standard of some nearby city.

For each locality, noon was set at approximately the time when the sun was nearest to being directly overhead. As the sun passed across the country from east to west, the various communities would observe it and fix their own noons. As a result, the nation's clocks were set in hundreds of ways. There were at least 27 time standards in Illinois alone.

In those days, when it was exactly noon in Chicago, it was 11:27 in Omaha, 11:50 in St. Louis, 12:07 in Indianapolis, 12:13 in Cincinnati, and 12:31 in Pittsburgh.

For a long while, Kansas City had no uniform time standard at all. The city's leading jewelers were the generally accepted timekeepers, but each of them set his own standard and any two of them rarely agreed.

During our country's earliest years, the confusion of time systems did not make too much difference. The various towns and communities were isolated from one another to a far greater degree than they are today. In most cases, people who used one standard of local time didn't have close contact with people who used some other standard.

Today, though, we could hardly get along under a system involving hun-

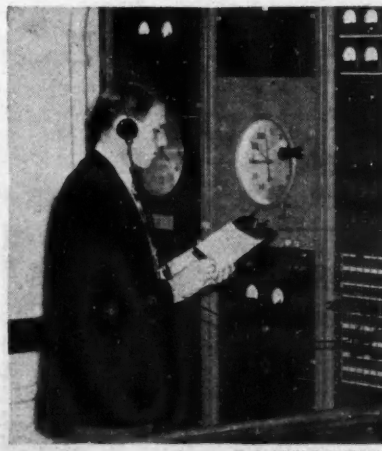
dreds of time zones. Airlines, railways, buses, radio and TV networks—none of these could operate satisfactorily without some simple, uniform way of telling the time.

It was because the long railroads became hopelessly snarled in the confusion of local time standards that our present system was finally adopted. In 1883, the railway companies set up a plan by which the United States was divided into four huge belts—Pacific, Mountain, Central, and Eastern. These are the zones which, with slightly different boundaries, still exist today. (For a time there was a fifth zone taking in the eastern part of Maine. It is no longer used in the U. S.)

Standard time is uniform throughout each of the four present areas, and there is exactly an hour's difference between adjoining zones. Thus, when it is noon in Washington, D. C., it is 11:00 in the morning in Chicago, 10:00 in Denver, and 9:00 in San Francisco.

The railroads persuaded the whole nation to follow their pattern in standard time zones. The arrangement was put into operation without federal legislation of any kind. It was not until 1918 that Congress wrote the railroads' time system into law.

While the railroads were setting up our time zones, similar arrangements were being made for most of the world. In 1884, more than 2 dozen countries sent delegates to a conference in Washington, D. C. This meeting laid the foundations for the present world system of time zones.



THIS CLOCK, in the Naval Observatory, Washington, D. C., starts signals that go out by radio to give correct time to all parts of the United States